

## Assignment 5

Textbook Assignment: "Fire fighting Equipment and Systems, Fighting the Fire, and Battle Damage Repair;" pages 5-47 through 7-8.

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Learning Objective: Describe the operation and storage of a P-250 fire pump.

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- 5-1. The P-250 pump will prime itself for what range of suction lifts?
1. 16 to 20 ft
  2. 21 to 25 ft
  3. 26 to 30 ft
  4. 31 to 40 ft
- 5-2. A P-250 pump will fail to draw water or have an uneven discharge under which of the following conditions?
1. The gaskets at the suction connections are not the right size
  2. The foot valve is not completely submerged
  3. The connections between the foot valve and pump are loose
  4. Each of the above
- 5-3. You are starting a P-250 pump and you have connected the fuel hose to the plug on the control panel. What should be your next step?
1. Pull the choke knob to the extended position
  2. Fill the gasoline tank with 1/2 pint SAE 30 engine oil to each gallon of gasoline
  3. Turn the high- and low-speed knobs on the control panel three-quarters of a turn counterclockwise from the closed position
  4. Fill the line to the carburetor by pressing the push button on the tank several times until you feel some resistance
- 5-4. After starting a P-250 pump, you notice that water pressure is not building up on the gauge. How should you correct the problem?
1. Increase the pump speed by adjusting the throttle
  2. After the pump has operated for not more than 45 seconds, stop the engine, tighten the hose connections and couplings, and prime again
  3. Decrease the pump speed by partially closing the throttle
  4. Allow the pump to operate for 1 minute, then stop the engine and prime again
- 5-5. The P-250 pump starts to cavitate due to air in the impeller housing. HOW should you correct the problem?
1. Speed up the pump
  2. Slow down the pump
  3. Close the outlet valve momentarily
  4. Open the outlet valve momentarily
- 5-6. You are preparing a P-250 pump for temporary storage after use. After the pump and pump head are drained, what should be your next step?
1. Lubricate the impeller with a light oil
  2. Drain and refill the oil sump
  3. Flush the pump with clean fresh water poured through the impeller housing drain
  4. Flush the pump with clean fresh water poured into the impeller housing through the manual priming bowl
- 5-7. The P-250 Mod 1 pump is hand primed up to what range of suction lift?
1. 10 to 15 ft
  2. 16 to 20 ft
  3. 25 to 30 ft
  4. 30 to 35 ft

5-8. You have started a P-250 Mod 1 pump and water pressure is NOT building up on the gauge. What should you do to correct the problem?

1. Increase the pump speed by adjusting the throttle
2. After the pump has operated for not more than 20 seconds, stop the run, check all suction hose connection and gaskets and prime again
3. Decrease the pump speed by partially closing the throttle
4. Allow the pump to operate for 1 minute, then stop the engine and prime again

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Learning Objective: Identify the construction, color coding, stowage requirements, and safety precautions for low- and high-pressure gas cylinders.

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5-9. The letter X before the numerals on a Navy cylinder indicates that the cylinder is filled with which of the following gases?

1. Hydrogen
2. Oxygen
3. Nitrogen
4. Acetylene

5-10. The type of compressed gas contained in a gas cylinder can be readily identified by which of the following cylinder characteristics?

1. Shape
2. Weight
3. Height
4. Color

5-11. A full gas cylinder has an expired retest date. You should take which of the following actions?

1. Survey the cylinder and jettison it at sea
2. Use the cylinder and mark it "for retest" and return it to the nearest supply center or cylinder testing activity
3. Relieve the pressure and return the cylinder to the nearest naval supply center
4. Return the cylinder unused and marked "for retest" to a cylinder testing activity

5-12. When a special handling truck is NOT available, what is the preferred way to move a gas cylinder?

1. Lay it on its side and roll it
2. Tilt it and roll it on its bottom edge
3. Drag it by the top
4. Slide it lengthwise

5-13. Flammable compressed gases may be stored aboard ship in a compartment with what maximum temperature?

1. 90°F
2. 110°F
3. 130°F
4. 150°F

5-14. An iced-up outlet on a gas cylinder should be freed by which of the following methods?

1. Chip the ice with a hammer
2. Remove the ice with a pick
3. Pour warm water over the ice
4. Melt the ice with a blowtorch

5-15. The Navy's gas valve program is trying to reach which of the following goals?

1. Standardize outlets and connections
2. Replace packed valves with non-backseating valves
3. Standardize valves and diaphragms so repairs can be performed onboard ship
4. Make outlets and connections non-interchangeable

5-16. The safety device will most likely rupture on which of the following Navy cylinders?

1. A CO<sub>2</sub> fire extinguisher cylinder that has been charged to 2,500 psi
2. A liquified petroleum cylinder with an ICC maximum charge rating of 20 psi that has been charged to 35 psi
3. An air cylinder that has been charged to 2,550 psi
4. An air cylinder that has been exposed to the heat of a fire and has built up an internal pressure of 3,000 psi

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Learning Objective: Recognize practices used to repair various types of valves.

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5-17. When a valve is installed in its most desirable position, the valve stem should be pointing in what direction?

1. Horizontal
2. Straight down
3. Straight up
4. Midway between straight down and horizontal

5-18. You should use which of the following materials to spot-in a valve?

1. Red lead
2. Prussian blue
3. Lubricating oil
4. Grinding compound

5-19. In a properly ground-in valve, the contact area should cover approximately what fraction of the seating area?

1.  $\frac{1}{4}$
2.  $\frac{1}{3}$
3.  $\frac{1}{2}$
4.  $\frac{2}{3}$

5-20. When you are using pencil marks to spot-in a valve seat that has been refaced, you should place the marks on the bearing surface of the seat at approximately what intervals?

1. 1 in.
2. 2 in.
3.  $\frac{1}{4}$  in.
4.  $\frac{1}{2}$  in.

5-21. When packing the gland of a valve, you should lay the string packing in what direction?

1. In the same direction as you would tighten the gland nut
2. Opposite the direction that you would tighten the gland nut
3. Opposite the direction the valve turns
4. In the direction the valve turns

5-22. Light pitting of a gate valve can best be corrected by which of the following means?

1. Lapping
2. Grinding
3. Scoring
4. Burnishing

5-23. A hydraulic control valve does not close when hydraulic pressure is released. The stem is not binding, therefore, you should check for which of the following causes?

1. A bent cup washer
2. An open firemain valve
3. A curled leather disk
4. A broken spring

5-24. The pilot valve connection of a dual solenoid Control valve has a small leak. What action should you take?

1. Ignore the leak as being unimportant and normal
2. Disassemble the connection and repair it
3. Stop the leak by tightening the valve
4. Periodically observe the valve to see if the leak is increasing

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Learning Objective: Describe the fire prevention duties of a Damage Controlman.

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● In answering questions 5-25 through 5-27, assume that you are making a fire prevention inspection of your ship.

5-25. You find a pump motor where the insulation has been stripped from a portion of electric wire. You should take which of the following actions?

1. Cover the wire with tape
2. Replace the wire
3. Notify the electrician
4. Replace the electric motor

5-26. You find a welder working alone cutting metal in the crew's quarters. You should take which of the following actions?

1. See that a fire watch is posted
2. Stop the welder's work
3. Remove all flammable materials near the welder
4. Stand by with a fire hose until the welding is done

5-27. You find gasoline stored in improper containers in a lifeboat. You should take which of the following actions?

1. Put the gasoline in the proper container
2. Pour the gasoline over the side of the ship
3. Move the container to a fireproof storage area
4. Report your findings to the proper authority

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Learning Objective: Describe the operation and uses of protected equipment.

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- A. FACEPLATE
  - B. BREATHING BAG AND TUBES
  - C. TIMER
  - D. BREASTPLATE ASSEMBLY
  - E. COMBINATION VALVE ASSEMBLY
  - F. HARNESS AND WAIST STRAPS
  - G. OBA QUICK-STARTING CANISTER

Figure 5-A

IN ANSWERING QUESTIONS 5-28 THROUGH 5-30, REFER TO THE OBA PARTS IN FIGURE 5-A.

5-28. What component directs the flow of air through the canister to the breathing bag?

1. C
2. D
3. E
4. G

5-29. What component produces the oxygen, you breathe when you first don the OBA?

1. A
2. B
3. E
4. G

5-30. The air you breathe flows through what components?

1. A, B, and D
2. A, B, E, and G
3. C, D, F, and G
4. B, O, E, and G

5-31. What are the colors of the (a) quick starting canister and (b) training canister?

1. (a) Red (b) green
2. (a) Red (b) black
3. (a) Green (b) red
4. (a) Black (b) green

5-32. To activate the quick-starting canister in the OBA, you should take what action?

1. Remove the cottor pin
2. Remove the lanyard
3. Push down on the cap of the canister
4. Break the copper-foil seal

5-33. You should set an OBA timer for how many minutes?

1. 60 min
2. 45 min
3. 30 min
4. 15 min

5-34. You can find additional information on the OBA in what part of the Naval Ships' Technical Manual?

1. Chapter 021
2. Chapter 079, volume 2
3. Chapter 328
4. Chapter 1287, volume 1

5-35. You are tending a line for a person wearing an OBA in a smoke-filled room when you feel four pulls on the line. What is the meaning of the signal?

1. OK
2. Advance
3. Take-up
4. Help

5-36. An OBA training canister provides oxygen for how many minutes?

1. 5 min
2. 10 min
3. 15 min
4. 20 min

5-37. The emergency escape breathing device (EEBD) provides air for how many minutes?

1. 5 min
2. 10 min
3. 15 min
4. 20 min

5-38. The EEBD is limited to use in which of the following situations?

1. Poison gas attacks
2. Swimming in oil-covered water
3. Biological warfare attacks
4. Emergency evacuation from smoke-filled spaces

5-39. The air-line mask can be used with what maximum length of hose?

1. 25 ft
2. 100 ft
3. 150 ft
4. 250 ft

5-40. Which of the following protective equipment may be used to fight fires?

1. OBA
2. EEBD
3. Airline mask
4. All of the above

5-41. The proximity fire-fighting suit is designed to protect you from which of the following dangers?

1. Smoke
2. Heat
3. Fire
4. Purees

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Learning Objective: Identify and explain the use of atmospheric testing devices.

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5-42. Who is responsible for certifying the safety of a closed or poorly ventilated compartment?

1. The gas-free engineer
2. The fire-party leader
3. The repair party leader
4. The commanding officer

A. OXYGEN ANALYZER  
B. COMBUSTIBLE GAS INDICATOR  
C. BACHARACH UNIVERSAL GAS SAMPLER  
D. DRAGER MULTIGAS DETECTOR

Figure 5-B

IN ANSWERING QUESTIONS 5-43 THROUGH 5-46, REFER TO THE ATMOSPHERIC TESTING DEVICES IN FIGURE 5-B .

5-43. Which device is used to test for the lower explosive limits of gases within a space?

1. A
2. B
3. C
4. D

5-44. Which device is used to ensure that the oxygen in a space is within the safety range of 20 to 22 percent?

1. A
2. B
3. C
4. D

5-45. Which device has a separate detector bulb to test for each type of toxic gas within a space?

1. A
2. B
3. C
4. D

5-46. Which device uses a different indicator tube and scale to test for each type of toxic gas within a space?

1. A
2. B
3. C
4. D

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Learning Objective: Identify the forcible entry tools used to fight a fire and explain their uses.

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5-47. When cutting with a hacksaw, you should NOT use which of the following practices?

1. Mount the blade with the teeth pointed toward the handle
2. Saw at 40 to 50 strokes per minute
3. Keep the blade tight at all times
4. Apply pressure only on the forward stroke

5-48. Bolt cutters may be used to cut mild steel stock up to what diameter?

1. 1. in.
2. 3/4 in.
3. 1/2 in.
4. 1/4 in.

5-49. The portable peck-type oxyacetylene cutting outfit may be used for which of the following purposes?

1. To cut a rod in a routine chop job
2. To weld a broken pipe
3. To cut an emergency escape hole in a bulkhead
4. To burn old paint off of a surface to be repainted

5-50. When using the portable pack-type oxyacetylene cutting torch, which of the following metal forms can be cut more efficiently if you chisel a small burr at the starting point?

1. Metal piping
2. Thin steel plate
3. Steel wire and cable
4. Round bars and heavy sections

5-51. Mixing oxygen and acetylene in the lines of the portable pack-type oxyacetylene cutting torch can cause which of the following problems?

1. Blowouts
2. Explosions
3. Flashbacks
4. Loss of pressure

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Learning Objective: Describe the basic fire-fighting procedures.

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5-52. Who determines the methods, equipment, and number of persons needed to fight a fire?

1. The officer of the deck
2. The first person to see the fire
3. The scene leader
4. The senior person present

- A. FIXED WATER SPRINKLING
  - B. HIGH VELOCITY FOG
  - C. SOLID WATER STREAM
  - D. AFFC
  - E. PKP
  - F. PORTABLE CO<sub>2</sub>
  - G. HALON 1301
  - H. MAGAZINE SPRINKLING
  - I. FIXED CO<sub>2</sub>
  - J. FIXED FLOODING CO<sub>2</sub>
  - K. TAU
  - L. CO<sub>2</sub> HOSE AND REEL

IN ANSWERING QUESTIONS 5-53 THROUGH 5-56, REFER TO THE FIRE-FIGHTING AGENTS AND EQUIPMENT IN FIGURE 5-C.

5-53. What agents and equipment are recommended for burning woodwork?

1. A, B, C, D, E, F, G
2. B, D, E, F, J, L
3. C, D, E, H, I
4. F, G, H, I, K, L

5-54. What agents and equipment are recommended for burning paint stores?

1. B, C, E, F, I, J, K
2. C, D, F, G, H, I, L
3. A, B, D, E, F, G, I
4. D, E, G, J, K

5-55. What agents and equipment are recommended for burning gasoline?

1. A, B, E, F, G, J, L
2. A, D, E, G, J, K
3. E, F, I, K, L
4. E, F, G, I, J

5-56. What agents and equipment are recommended for burning electronic equipment?

1. A, B, D, E, J, K
2. B, C, E, F, G, H, L
3. C, D, E, H, I, J, K
4. B, E, F, G, L

5-57. When you are preventing the spread of a fire, which of the following actions is most dependent on circumstances?

1. Setting up fire barriers
2. Removing explosive materials near the fire
3. Cooling adjacent decks and bulkheads
4. Closing the ventilation system

5-58. An extinguished fire should be overhauled to prevent which of the following dangers?

1. Flooding
2. Toxic gases
3. Reflash
4. Water damage

5-59. When desmoking a space, your choice of exhaust or supply ventilation depends on which of the following factors?

1. The type of fire
2. The location of the space
3. The agent used to extinguish the fire
4. The method of overhaul

Figure 5-C

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Learning Objective: Identify the different kinds of damage control equipment and materials and explain their use.

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5-60. The purpose of a DC kit is identified by which of the following means?

1. An attached list of contents
2. A stenciled ID on the kit
3. Both 1 and 2 above
4. The color of the kit

5-61. Rigging gear should NOT be used for which of the following purposes?

1. To clear away wreckage
2. To push heavy weights into place
3. To lift heavy weights
4. To substitute for shoring

5-62. Which of the following materials may be used to plug and patch holes in the hull?

1. Manila rope
2. Kapok life jackets
3. Plywood
4. Both 2 and 3 above

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Learning Objective: Explain the procedures used to deal with holes in the hull.

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5-63. Your ship has been hit on the port side. One compartment has one large hole and three compartments each have several small holes. Assuming you can seal off all compartments, you should take which of the following actions first?

1. Repair the smaller holes
2. Repair the large hole
3. Repair all holes at once
4. Start pumps and wait for a repair ship

5-64. Your ship has four holes in the hull, each less than 12 inches in diameter. They are

- A. just above the waterline on the portside.
- B. just above the bilges on the port side
- C. just below the main deck on the starboard side
- D. In the bilges on the starboard side

assuming you can seal off the flooding compartment, you should repair the holes in what order?

1. A, B, C, D
2. B, D, C, A
3. A, B, D, C
4. C, A, B, D

- A. BOX PATCH
  - B. PLUGS
  - C. HINGED PLATE PATCH
  - D. HOOK BOLTS
  - E. FOLDING T PATCH
  - F. CAULKING

Figure 5-D

IN ANSWERING QUESTIONS 5-65 THROUGH 5-68, REFER TO THE PLUGGING AND PATCHING METHODS IN FIGURE 5-D.

5-65. A hole less than 3 inches in diameter normally should be controlled with which method?

1. A
2. B
3. C
4. D

5-66. Which method has no vertical support and is used for relatively small holes?

1. A
2. C
3. D
4. F

5-67. You want to hold a pillow in place over a hole and outside the hull. You should probably use which method?

1. A
2. B
3. D
4. E

5-68. Riveted joints that have been loosened enough to let water in the ship should be repaired with which method?

1. A
2. D
3. E
4. F